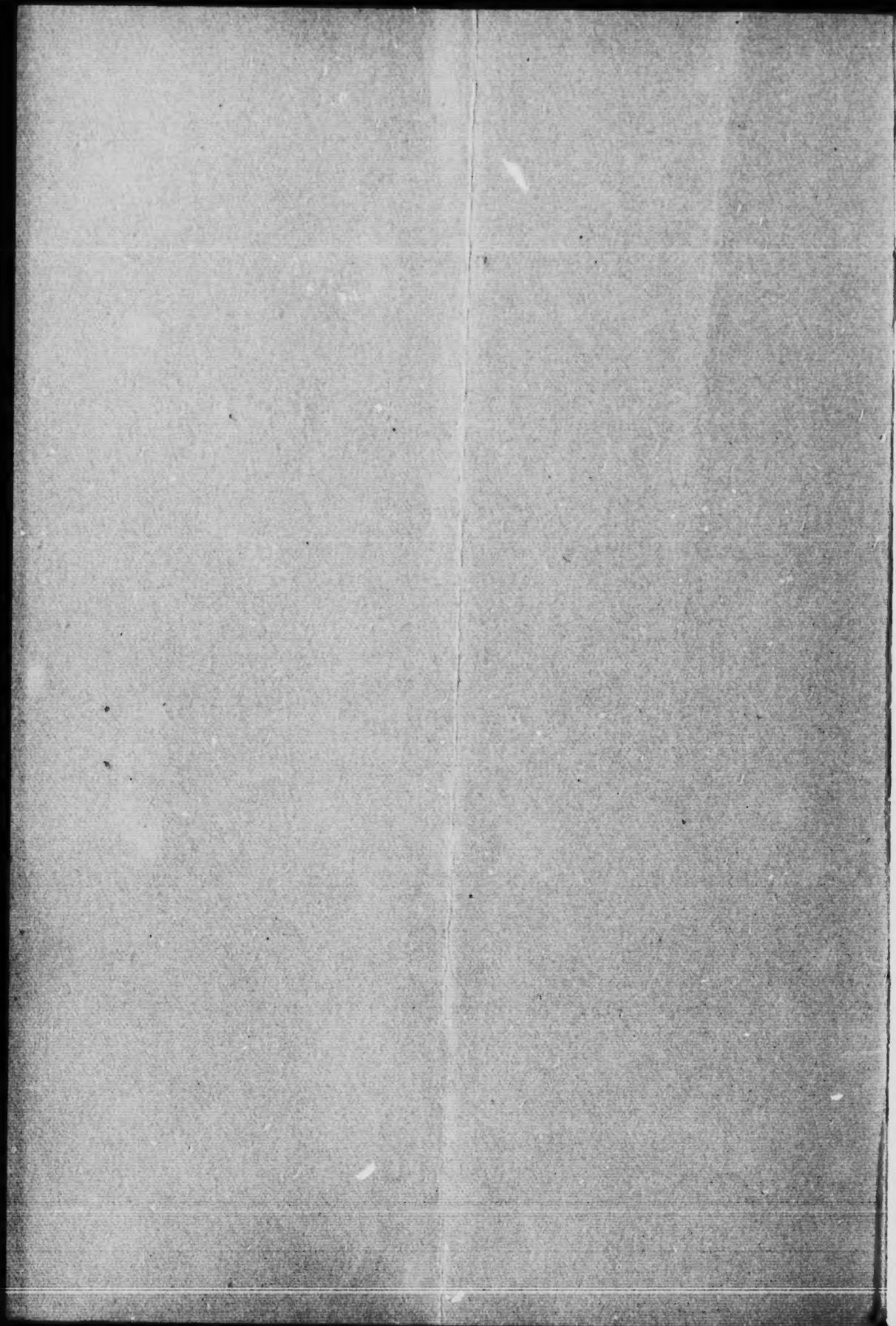


**In the Matter**  
  
**of**  
  
**Butter Fat Standards for Ice Cream Adopted Pursuant to Section 26 of the Adulteration Act**

**BRIEF ON BEHALF OF WILLIAM NEILSON, LIMITED, OF  
TORONTO, CANADA**

*Walter Jeffreys Carlin*

**WALTER JEFFREYS CARLIN,**  
**Counsellor-at-Law for William Neilson, Limited.**



**IN THE MATTER**  
**of**  
**BUTTER FAT STANDARDS**  
**for**  
**ICE CREAM.**

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**Statement.**

William Neilson, Limited, of Toronto, respectfully submits the following as a statement of reasons why the present standards for ice cream should be abolished or changed and modified.

Some months since this matter was taken up with Dr. McGill, and he suggested that the manufacturers of all the important cities should be consulted and their views obtained.

With this in mind a meeting of the principal manufacturers of Toronto, Hamilton, Ottawa, Montreal, and Winnipeg, was held in Toronto and it was the unanimous opinion of all present that the present standards were improper in that they preclude the use of milk, condensed milk, eggs and other customary and usual ingredients of ice cream and also in that they require specified percentages of butter fat.

The manufacturers assembled were unanimous in the belief that the present standards are injurious to the ice cream industry of Canada and that if the same were rigidly enforced the industry would, in a measure, be destroyed, and that the present standards are hampering and hindering the development of the industry.

It is submitted that the present standards are without a reasonable or proper basis and are injurious, not only to the ice cream industry, but also to the dairy industry in Canada, the development of which depends in a large measure on the development of the ice cream industry, and further, that the present standards tend to mislead and deceive the consumer.

It is therefore respectfully requested that the present standards be abolished and that the whole question be taken up *de novo* by the Department and considered in the light of the arguments here presented.

### THE ICE CREAM INDUSTRY.

The ice cream industry is one of the newer industries, having been developed from a small business to an important industry within the past ten or twelve years.

It has reached its highest point of development in the United States and particularly in certain parts thereof, in the States of Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Maryland, Ohio, Indiana, Illinois, Iowa, Wisconsin, Michigan and Minnesota, and in recent years on the Pacific Coast, California, Washington and Oregon, and it might be here added that it is in these States that the development of the dairy industry has been most notable.

The development of the ice cream industry began a little later in Canada than in the United States, and its development has been very rapid until to-day the ice cream industry is as important to the dairy industry of Canada as the ice cream industry of the United States is to the dairy industry.

The above are the only countries in which the ice cream industry is an important factor, though in Australia there has quite recently been a considerable development of the industry.

In Great Britain and the other countries of the world, the ice cream industry is relatively unimportant.

Some idea of the extent of the industry in the United States will be gathered when it is realized that in 1911 it was conservatively estimated that there was \$70,000,000 invested in ice cream factories and equipment. Approximately 175,000,000 gallons of ice cream was sold, which at an average wholesale price of eighty cents per gallon, amounted to \$140,000,000.

In Canada no figures are available except those set forth in a paper by J. A. Ruddick, Dairy and Cold Storage Commissioner, and published by the Department of Agriculture on March, 1913, entitled, "A Review of the Dairy Produce Trade," where it is stated:

"I have been impressed, as every one who observe these things must have been, by the enormous increase in sweet cream consumption in the towns and cities and the great development of the ice cream business during the past six or eight years. We have recently made an attempt to collect some statistics of the cream and ice cream trades in twenty-four cities throughout Canada, and after a careful estimate I find that during 1912 the quantity of cream used in the manufacture of ice cream in these places was equivalent to nearly two million pounds of butter or over four million pounds of cheese. If we add to this the sweet cream sold, we have a total which represents over six million pounds of butter or thirteen million pounds of cheese. This estimate takes no account of the hundreds of small businesses scattered through all the smaller towns. The surprising thing about this trade is, that as far as the ice cream is concerned, it has developed within the last six or eight years, and most of it is of much more recent origin. Of sixty establishments from which returns were obtained, all but thirteen have been started since 1904. The managers of these establishments say that their trade in 1912 showed an increase of 20 per cent.

over 1911, notwithstanding the fact that it was a phenomenally cool season and very unfavorable for the consumption of ice cream."

### THE RELATION OF THE ICE CREAM INDUSTRY TO THE DAIRY INDUSTRY.

The relation of the ice cream industry to the dairy industry has been carefully considered by Professor Gordon (Bulletin No. 58 of the Department of Agriculture, State of New York, published April, 1914). Professor Gordon states:

"The ice cream industry has accomplished three great benefits for the dairy industry. First, through the absorption of the milk surplus at a time when if it followed the old channels the market for dairy products would be shattered, it has equalized the value of dairy products, making that valuation more uniform the year around. The general level of the prices of dairy products has been raised by its influence and at the same time there has been a material reduction of the margin between high and low.

Second, the ice cream industry has rendered valuable every constituent part of milk, for not only is it an enormous user of cream and milk, but it also consumes enormous quantities of condensed milk.

Third, by affording a market for great quantities of sweet cream, it is securing for the whole dairy industry, milk and cream of better grade."

It is here to be noted as a first argument against the present standard that the second benefit to the dairy industry, referred to by Professor Gordon as above stated, will not accrue to the dairy industry of Canada if the present standard is not abolished, nor will the third if the ice cream supplied to the public is so rich that it can be eaten



only in small quantities, and if these two benefits fail the first must necessarily fail with them.

Professor Gordon in the same paper points out that taking as a basis 150,000,000 gallons of ice cream (he is using here figures of the year 1912), the ice cream industry utilized 250,000,000 pounds of cream, 255,000,000 pounds of whole milk and 132,000,000 pounds of condensed milk, and it is there pointed out that at the average price of fourteen cents per gallon for milk the producer, that is the farmer, received \$31,500,000 for this raw material during the year.

The other branches of the dairy industry, to wit: the creameries, condenseries, milk shippers, etc., received in addition thereto their profits on the handling of this amount of business.

It is submitted that it is fair to say that these standards are obviously based on the standards set forth in Circular 19, Bureau of Chemistry, United States Department of Agriculture, which was issued on the 31st day of May, 1906, or just six days before the Food and Drug Act went into effect.

The standards set forth in Circular 19 were adopted without a hearing and hastily promulgated so as to avoid conflict with the Food and Drug Act which was then pending before Congress. It is fair to state that the Board claimed to have given notice of a hearing to the ice cream men, but investigation proved that no such notice had been given to ice cream manufacturers, but that through an error such notice had been sent to the members of the National Confectioners' Association, practically none of whom had any interest in ice cream.

These standards never did have the force and effect of law in the United States and the attempts made by the Government to have the Courts support these standards were universally unsuccessful. There were only a few cases tried and after the Courts had decided against the Government it was finally decided to bring

test cases in the City of Cincinnati. When these cases were brought the manufacturers requested a hearing before the Department of Agriculture and such a hearing was afforded them. A copy of minutes of the hearing is submitted herewith.

We know of no official action taken by the United States Department of Agriculture in reference to ice cream standards, but we can state that the Cincinnati cases, which were involved in the said hearing, have been dismissed on motion of the Government and that at present there are no prosecutions pending against any ice cream man for failing to comply with the said standards. We are informed that the United States Government is now conducting experiments for the purpose of ascertaining what standards, if any, for ice cream, are fair and practical.

It is important to repeat here and note at this point that the Canadian standards require: (1) That cream only shall be used and that no condensed milk or milk shall be used and also that other ingredients, such as eggs, etc., are excluded; (2) that there is a requirement of 14 per cent. butter fat in plain ice creams and 12 per cent. butter fat in fruit and nut ice creams.

#### WHAT IS ICE CREAM?

The arguments presented for the present standard for ice cream are to be found in Laboratory Bulletins 162, 190, 218 and 276.

The important bulletin on this subject is 218. In Bulletin 162 it is stated, "It is evident that the article should consist essentially of frozen cream and sugar and, had we a standard for cream, such standard should be applicable to frozen cream unless otherwise specified."

In Bulletin 218 the standards are officially promulgated and the argument in support of same refers back to the former bulletins and taking the bulletins together, the arguments may be thus summarized. First:



The term ice cream conveys to the public mind that they are obtaining a product made of iced dairy cream. Second: That cream is the most essential, costly and nutritive component of the food stuff and is the basis taken by physicians in prescribing its use.

It might be well to note here that in Bulletin 218 it is claimed that there was an "improvement" in the quality of Canadian ice cream, it being stated that the percentage of collected samples conforming to the standards had improved from 50 per cent. in 1908, to 70 per cent. in 1910. If this was an argument in 1910, then what is to be said of the situation in 1914 (Bulletin 276) when but 64 per cent. of the samples collected conformed? But it is submitted that this is not an argument, for the percentage of collected samples does not show that a certain percentage of the ice cream sold conformed in any way to the percentage of samples which were found to be up to standard.

What is ice cream? The term "ice cream" is generic. Like "candy," "confectionery," "bread," "cake," "pudding," "soup," etc., the term "ice cream" is the general name for a large class or group of products having some characteristics in common but varying widely as to ingredients—this variety extending to kind as well as to proportions. In the absence of qualifying words or phrases it is impossible to define "ice cream" with accuracy. That is to say, a statement reciting a list of ingredients, giving kind and amount or proportion, coupled with a description of the process of manufacture, does no more than describe one kind of ice cream.

To prove common knowledge, we must consult people who know, and in this matter the testimony of large and experienced manufacturers are submitted, which, together with the dictionaries and cook books, show the common knowledge. The experience of the largest manu-

facturers of ice cream in the world is shown in the reports of the Cincinnati hearings, filed herewith; the dictionaries and cook books are available to all.

The common knowledge that ice cream is made in various ways is recognized and plainly indicated in various dictionaries, where "ice cream" is defined as follows:

Webster—Cream or milk sweetened, flavored and congealed by a freezing mixture. Sometimes, instead of a cream, the materials of a custard are used.

Century—A confection made by congealing variously flavored cream or custard in a vessel surrounded with a freezing mixture.

Standard—Cream, milk, or custard, sweetened and flavored, and frozen by a freezing mixture, being usually agitated by a dasher in the process, to make it of uniform consistency.

From this it appears that while ice cream may be made of cream, sugar and flavor, it may also be made of milk, sugar and flavor, or of custard. It follows that the three principal ingredients here mentioned might be combined in an ice cream; and the cook books in general use to-day as well as those of an earlier time are warrant for the statement that a very much wider variety of ingredients has been used in ice cream from the time it came into common use as a dessert and as a light refreshment.

It is and for many years has been the custom of the trade to use condensed or evaporated milk as an ingredient of ice cream. There is no fixed rule or custom as to the amount or proportion of condensed milk used, the amount or proportion being varied in different kinds of ice cream, and it is significant that the amount or proportion varies widely in the products of different manufacturers. In some ice creams no condensed milk

is used; in some there is no cream, and in still others there is neither condensed milk nor cream.

Eggs in varying amount or proportion are called for in some ice creams—some kinds of ice cream—while other ice creams are made without eggs. The same is true as to all other ingredients, for even sugar is omitted in some special cases.

No cook book offered with any pretence of completeness or authority limits ice cream to one formula. The dictionaries do not so limit ice cream. The custom of the trade and the custom of the people do not so limit it.

It is submitted that there is no reasonable basis for the assumption that ice cream made of cream, sugar and a flavor is the only real, true or genuine ice cream. The name "ice cream" carries no such inference. The name or term comes to us from France by way of England. The French term is "*crème glace*" and the English translation of it is "cream ice" or "ice cream." In England the form "cream ice" is in general use, while we give preference to the other version, "ice cream."

In France and in England and with us the group of cream ices or ice creams is but a subdivision of the family of ices. Our dictionaries tell us that an ice is a frozen dessert, as ice cream or water ice; and in many of our hotels and restaurants and many of our cook books the term "ices" is employed even to-day as a general name for all frozen desserts, including biscuits, puddings and charlottes as well as ice creams, water ices, punches, etc. So that it is common knowledge that ice cream is first of all an ice and that in the term "ice cream," "cream" has only the value of an adjective, indicating in a general way, kind or character.

It is obvious that it has been assumed that the term "ice cream" is compounded from the verb "ice" and the noun "cream" and that the cream indicated is the cream from milk. Yet even this assumption was not followed to its logical conclusion, for, if it had been it

would be necessary to say that cream frozen is ice cream, whereas the definition includes sugar, flavor and colloidal substances, thus recognizing custom and common knowledge to that extent, while otherwise disregarding custom and common knowledge and giving to "cream" a predominant value and narrow meaning in the term "ice cream."

As the meaning of the word "cream" has here been limited and restricted we ask further consideration of the value and meaning of the word "cream" in the term "ice cream."

In cookery the word "cream" has various meanings and applications. We find it used as a verb, as an adjective and as a noun, and with such latitude that almost invariably it is necessary to go to the context to determine the sense in which it is used, and, especially where it is an element in a compound name or term, to determine whether its value is that of an adjective or a noun and whether it is preponderant or subsidiary. In the term "ice cream" we submit that "cream" is subsidiary.

Cooks and the makers of cook books have always used the word "cream" with great freedom, and the fact that many of the meanings implied by their use of the word have become fixed in our language is the best evidence that the uses they made of the word were good.

The dictionaries practically agree upon this definition of cream; for example the Standard says:

"A delicacy for the table resembling cream or made in part of it; as ice cream; an article of creamy consistence; a cream-like custard."

The cook books are themselves the best evidence that the term "ice cream" has always been applied to all ices that were made principally of cream, that contained cream, or that were so compounded of various ingredients as to resemble cream in appearance

or consistency. To other products of old kitchens and new, from confectionery, cakes and pastries to gruels, soups and gravies, the term has been and is applied with equal freedom and latitude, and we have yet to learn that it has been proposed to upset this usage in any case except that of cream ices which we call ice creams.

We protest that our extensive use of cream in the manufacture of ice cream is no warrant for the assumption that the public has been lately or ever was under the belief or impression that "cream" in the term "ice cream" means the cream from milk and nothing else. "Ice cream" means no more and no less today than it has meant since the term came into common use, and its meaning is well understood by the people generally; therefore our use of it as the general name for our products cannot deceive or tend to deceive our customers. The use and meaning of this term is stamped upon our language, as evidenced by our dictionaries, and the record of its use in the same sense in which we use it today is preserved in the cook books of five or more generations.

It might be well to here point out that there may be considerable trouble in defining other terms if "ice cream" is to be so defined.

"Plum pudding" contains no plums. "Salt of lemon" has nothing to do with the fruit of the lemon tree, but is potassium binoxalate, or potash treated with oxalic acid. "Carbolic acid" is no acid, but a phenol. "Soda water" shows no trace of soda. "Sulfuric ether" contains no sulphur. "Sugar of lead" contains no sugar. "Cream of tartar" has no cream, nor "milk of lime" any milk. "German silver" is not silver at all and "black lead" is graphite, not lead, while "Mosaic gold" is a sulphid of tin, and so we might go on.

An exhaustive study of the history of the term "ice cream," of its former and present meaning and of a proper definition for its present use has been made by

C. G. Child, M.A., Ph.D., L.H.D., Professor of English in the University of Pennsylvania, sometime Fellow of Johns Hopkins University, and for seven years assistant editor on the staff of Worcester's Dictionary. The paper is not yet in print, but his conclusions fully support each and every statement above made and we respectfully request permission to submit Professor Child's paper when the same is published and that the same be considered as part of this brief.

It may be well to quote just one statement of Prof. Child's, which is as follows: "It has been asserted that 'cream' in the compound 'ice cream' means the oily part of milk, which it does not mean, did not mean when the compound was adopted in English and has never meant since. Further it has been asserted that use of the term should be limited to a confection as made with cream (in that sense) alone—ostensibly for the interests of the public but in violation of the true meaning, and, it may be added, plainly to the prejudice of the public interest, if due consideration is given to the pertinent facts."

It is submitted that ice cream comes within those products which were discussed by Dr. Carl A. Alsberg, Chief of the Bureau of Chemistry, United States Department of Agriculture, at the meeting of the Association of American Food and Drug Officials, held at Portland, Maine, July 13th-18th, 1914, when he said:

"Still another factor that must be considered is that certain types of foods can not easily be standardized with any great exactness. These are the foods in which the personal taste and preference of the consumer dictate the composition. For them we must content ourselves with establishing general principles which will leave sufficient latitude for the full exercise of individual tastes. If we were to do otherwise our standards would degenerate into a compilation of cook book recipes."



The second argument is as to the nutritive value of "cream" and its cost. We may dispose of the cost question by saying that condensed milk and cream have practically the same market value.

As to the nutritive value of condensed milk, it is submitted that it has far greater nutritive value than cream, though perhaps its fuel or energy producing value is lower, and, further that the solids of milk not fat are the tissue and bone builders, whereas the fat is chiefly a heat or energy producer.

It is argued too that the nutritive value of the cream contained in ice cream "is the prime consideration in virtue of which physicians prescribe ice cream as an important article of diet in many cases of convalescence."

The amount of ice cream prescribed by physicians for their patients, convalescent or otherwise, is but a minute fraction of one per cent. of the ice cream manufactured and sold, and the composition of the ice cream so prescribed is but seldom if ever an important consideration. We submit that in a great majority if not all such cases ice cream is prescribed primarily because of its refrigerant properties and palatability rather than because of its nutritive value, and, further, that no physician would ordinarily prescribe ice cream rich in fat for a sick or convalescent patient.

Consumers in general, like the prescribing physician, value ice cream chiefly for its refrigerant action and palatability, and are but rarely concerned about its nutritive value; and even if ice cream were a primary food or were bought and eaten primarily for nutrition purposes, we submit that it still would be unreasonable and improper to make its content of butter fat the test or measure of its quality or nutritive value, or to consider its butter fat content of greater importance than its content of proteids and sugar.

### OTHER BUTTER FAT STANDARDS.

It is highly significant that statutes which purport to define ice cream vary in their provisions, both in defining the product and in fixing the standards, almost as widely as ice cream varies in ingredients and in the proportions of ingredients.

It has already been pointed out that the so-called Washington standard never had the force and effect of law; in fact the Secretary of Agriculture under date of June 8th, 1910, states:

"In answering the question in regard to this ice cream standard, it should be pointed out to you that Circular No. 19 has not the force and effect of law, and is not so construed by this Department in enforcing the Food and Drugs Act. It is used merely as an advisory factor."

Many States of the United States have adopted butter fat standards for ice cream, but it is significant that in the States where the ice cream industry has developed rapidly there is either no standard or a low requirement of butter fat. The important ice cream States above referred to have standards as follows:

There is no standard in Connecticut, New York, New Jersey or Ohio.

The standard in Massachusetts is:

"Substances manufactured and sold under the general name of 'ice cream' shall contain not less than 7 per cent. of milk fat and if flavored with fruit shall be flavored only with sound, clean, matured fruit, and if containing nuts shall contain only sound, matured non-rancid nuts."

The standard in Pennsylvania reads:

"No ice cream shall be sold within the State con-

taining less than eight (8) per centum butter fat, except where fruit or nuts are used for the purpose of flavoring, when it shall not contain less than six (6) per centum butter fat."

In Maryland the standard requires 4 per cent. in ice cream and permits the use of all milk substances, as so does Indiana, where the standard is 8 per cent. In Iowa, 12 per cent; in Michigan, 10 per cent.; in Wisconsin, 14 per cent. In Minnesota and Wisconsin no attempt is made to enforce the standards.

In California the standard was 14 per cent. and was reduced to 12 per cent.

In Washington there is no standard, while in Oregon the standard is 12 per cent.

The above standards were all made in a haphazard manner and were the guess of the respective Legislatures.

Illinois, the only State which made a real investigation of the question, adopted the following standard, issued by its Food Standard Commission:

"Ice cream is a frozen substance, made from cream, or milk and cream, and sugar, with or without the addition of such other wholesome substances as have customarily \* \* \* been used in making ice cream, and contains not less than eight per cent. (8%) milk fat.

"\* \* \* The following other substances have customarily been used in making ice cream: Eggs, flours, starches, butter, gelatin, flavoring, harmless colors, nuts, fruits, pastries and condensed milks."

Why they put the "eight per cent." in the standard, no one knows, for the Commission's report states that their reasons were too lengthy to be placed in the report.

The above are the only important ice cream States and it is important to note that in every one of these

States the use of milk and other milk substances is permitted, except in Wisconsin, and there no attempt is made to prevent the use of milk and condensed milk; in fact, no real attempt is made to enforce the Act.

The following shows the attitude of the other States as to butter fat standards.

Arkansas, Colorado, Delaware, New Mexico, South Carolina, Tennessee, Vermont and West Virginia have no standards, while in Florida, Louisiana, Maine, Nebraska, New Hampshire, Rhode Island, Texas and Virginia, milk as well as cream can be used in the manufacture of ice cream, and in fact, many of the statutes expressly mention milk.

The only State standards that insist on cream as a basic substance for ice cream are those which blindly followed the statement in Circular 19, and in these States the law is either an absolute dead letter or else no attempt is made to prevent the use of colloidal substances and of milk, condensed milk and eggs.

England: There is no standard for ice cream in England.

Ireland: There is no standard for ice cream in Ireland.

In Tasmania and Western Australia they had identical standards, which read as follows:

"Ice cream shall be a foodstuff composed of milk and of cream, with sugar, with or without fresh eggs, flavored with fruit, or with the juice or pulp of fruit or with nuts or with harmless vegetable substances or essences, colored or not with harmless coloring substances, and with or without candied fruits, liqueurs, or spirits, singly or in combination, sterilized by boiling, or pasteurized by being kept at a temperature of not less than 156° F. for 20 minutes, or of not less than 165° F. for 10 minutes, and subsequently frozen. Ice cream

shall contain not less than ten parts per centum of milk fat present in the form of cream."

In South Australia they had an eight per cent. standard adopted in 1908.

In 1913 the Second Conference on uniform standards for food and drugs of the Commonwealth of Australia was held in Melbourne. Representatives of The Commonwealth, New South Wales, Queensland, South Australia, Tasmania, Victoria and Western Australia were present and the following standard for ice cream was adopted by the conference:

"Ice cream is a foodstuff composed of milk or condensed milk or cream, with sugar, with or without fresh eggs, flavored with fruit or with the juice or pulp of fruit, or with nuts or with harmless vegetable flavoring substances or essences, colored or not with harmless coloring substances, and with or without candied fruits, liqueurs, or spirits, singly or in combination, sterilized by boiling, or pasteurized by being kept at a temperature of not less than 156° F. for twenty minutes, or of not less than 165° F. for ten minutes, and subsequently frozen. Ice cream shall contain not less than three parts per centum of fat derived solely from milk and eggs."

#### THE STANDARD FAILS TO INFORM THE CONSUMER AS TO THE AMOUNT OF BUTTER FAT PRESENT AND INVITES FRAUD.

Ice cream is sold by the plate, pint, quart or gallon. It is never sold by weight, yet the standard provides for a percentage test by weight.

Ice cream with the *same* percentage of fat may *vary in amount* of fat in a measured quantity and of course the public are only interested if at all, in the *amount* of butter fat they receive.

That the *percentage* of butter fat of two or more ice creams may be the same, yet the *amount* of butter fat in each be different, can readily be shown. When the ingredients of ice cream are ready to be frozen, the manufacturer refers to it as "mix" or "mixture" and all mixtures are figured on a basis of the amount of ingredients necessary to make 10 gallons of the finished product. To make ten gallons of ice cream, some manufacturers use five gallons of mix, some use six gallons, some seven, some eight and others nine, and in the freezing process the mix, whether it be five, six, seven, eight or nine, is beaten up to make ten gallons or thereabouts. In fact these variations as to amount of mix used are frequently made where a manufacturer produces different kinds of ice cream. So if we assume that the various mixtures have the same weight per gallon, say 10 pounds, then take 5 gallons (50 lbs.) of 14 per cent. mix to make 40 quarts of finished product, and the finished product will weigh five pounds to the gallon and each gallon will contain .6 pounds of butter fat.

Take 6 gals. of 14% mix  
       6 lbs. to gal. finished  
       14%  


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 .84 lb. butter fat to gallon.

Take 7 gals. of 14% mix  
       7 lbs. to gal. finished  
       14%  


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 .98 lb. butter fat to gallon.

Take 8 gals. of 14% mix  
       8 lbs. to gal. finished  
       14%  


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 1.12 lb. butter fat to gallon.



Take 9 gals. 14% mix—for very heavy ice cream.

9 lbs. to gal. finished

14%

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1.26 lbs. of butter fat to gallon.

The above shows conclusively that a statement or declaration of the *percentage* of butter fat does not inform as to the *amount* of butter that a purchaser receives in his plate, pint, quart or gallon. So the percentage requirement is useless to the public.

Not only do ice creams with the same *percentage* contain different *amounts* of butter fat, but ice creams containing *different percentages* of butter fat may have practically the *same amount* of fat in a measured quantity.

Using the same weights as above, take five gallons (50 lbs.), of 14 per cent. mix to make forty quarts of finished product, and the finished product will weigh five pounds to the gallon and each gallon will contain .7 pound of butter fat.

Take 6 gals. 12% mix

6 lbs. to gal. finished

12%

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.72 lb. butter fat to gallon.

Take 7 gals. of 10% mix

7 lbs. to gal. finished

10%

---

.70 lb. butter fat to gallon.

Take 8 gals. of 9% mix

8 lbs. to gal. finished

9%

---

.72 lb. butter fat to gallon.

Take 9 gals. of 8% mix  
 9 lbs. to gal. finished  
 8%

---

.72 lb. butter fat to gallon.

Where nine gallons of 8 per cent. mix are used to make forty quarts of finished product the amount of fat to the gallon (.72 lb.), is two one-hundredths of a pound more the amount of fat in a gallon of 14 per cent. ice cream that is legal ice cream under this standard.

From the above we see that (1) while the requirement of the standard is strict as to 14 per cent. of the whole mass being butter fat, a constituent of one of the permissible ingredients and not itself an ingredient, the volume or quantity of butter fat may vary at least as much as 50 per cent. in a given volume or measure of the product, and a purchaser relying upon the false assurance of the law and in no wise exercising the vigilance and right of choice he had been wont to exercise might easily be deceived and defrauded and the offender go unwhipped of the law; and (2) standard ice cream—that is to say the only product that may be sold as ice cream under these standards—may safely be represented to the purchaser as superior to all other products heretofore commonly known and sold as ice cream, whereas it is common knowledge that there are products heretofore lawfully salable as ice cream that are in both intrinsic value and food value superior to such ice cream as may be sold as ice cream under this standard.

On the other hand it makes no difference where the fat point is fixed, it is always possible to make a legal mix illegal by adding ingredients that *improve* it, as when eggs are added, or when to produce heavy body in the finished product without increasing materially the *amount* of fat in a measured quantity, extra milk is

added to a batch to make a given quantity. In other words if we take five gallons of any mix to make 40 quarts of ice cream that will pass as legal ice cream under this standard and add to that five gallons of mix four gallons of whole milk and still produce but forty quarts of finished product, we increase the *amount* of butter fat in each gallon, but the *percentage* of fat is so reduced as to make the product illegal.

Or if to make forty quarts of French ice cream we take all the materials to make eight gallons of 14 per cent. mix and add to them anywhere from 80 to 120 eggs (approximately eight to twelve pounds) we make a product that is illegal under these standards, though it contains besides the eggs much more fat to the gallon than is necessary in other kinds of ice cream that pass as legal.

NOTE.—The gallon referred to above is the Winchester or wine gallon, in use in the United States, not the Imperial gallon.

There can be no question of deception in selling an ice cream containing no more than 6, 4, 2 per cent., or even no butter fat whatever. As long as it is ice cream and it may be in any of these instances, and if it pleases the customer who has not specified or even *intimated* that he wanted any particular percentage or any particular amount of butter fat, he gets what he ordered and is not deceived or defrauded. The only case in which he would be deceived or defrauded, is where he specified that the ice cream should be made only of cream or should contain a certain percentage of butter fat and the product sold him was not in accordance with the representations made. Here we have no such case—the only representation made is that the product is ice cream, and there can be no doubt that such a product is ice cream within the common acceptance of the term.

If it could be said that a man who purchases a 10

per cent. ice cream is deceived or defrauded, what about the man who purchases a 12 per cent. ice cream? Is he defrauded or deceived because, whether he knows it or not, he could have purchased next door ice cream containing 14 or 16 per cent.? Or suppose he purchased a 16 per cent. ice cream, if next day he purchases from another dealer a 14 per cent. ice cream, is he deceived or defrauded in the second instance. In all cases he gets ice cream which is what he asked for and he certainly is not deceived. A customer will regulate his purchases by his taste and pocket book and the manufacturer has the right to fulfill the demand and to sell a wholesome product, under its proper name, which the public taste demands.

We submit, first, that there can be no fraud in the sale of ice cream in the absence of misrepresentation as to the ingredients of the product and that, therefore, there is no reasonable basis for these standards, and, second, that in any case these standards are not reasonably designed to accomplish their declared purpose.

Unless it is held to be established that there is but one type or kind of real, genuine or pure ice cream, then these standards laying down definitions of and standards for ice cream, and in effect prohibiting the sale of all other types or kinds of ice cream regardless of their wholesomeness and value, should not remain in force and effect.

#### **BUTTER FAT STANDARDS IMPRACTICABLE AS WELL AS UNFAIR.**

To determine whether or not such standards as those in question should be enforced, we must consider whether or not the manufacturer has a fair opportunity to comply with them.

An inspector purchases a pint, quart or smaller portion of ice cream from a dealer; that is the true test, just

what the ordinary purchaser would receive. From a ten gallon can of ice cream which was made according to a 14% formula one purchaser may receive a 17%, and another an 11% ice cream, and others anything between the two. In other words, a manufacturer cannot use a 14% mix, for if he does, an inspector may at any time purchase a sample of his product which contains not more than 10 or 11%. The reason for this is apparent when the character of the mixture and the process of manufacturing are considered.

The mixture is made in big mixing tanks, usually holding 100 or 200 gallons, and in these tanks the fat has a tendency to rise, and the heavier solids including the sugar, to fall. The mixture then goes to the freezer, and when frozen to the consistency of thin mush pours directly into the cans. It is hardened in the cans either in hardening rooms or surrounded with ice and salt and a sharp freeze is set up. The temperature is from 5 above zero to 5 below, and this action is very sharp, and just as with any mixture consisting in large part of water, the water tends to freeze first. The average ice cream is 65% water, no matter whether it is made from cream, sugar and flavor, or cream, condensed milk, milk, sugar and flavor, and the remaining 35%, the total solids, includes the sugar. Now that 65% of water crystallizes first and tends gradually to force the fat towards the center, and at this stage the ice cream is still soft enough so that there is still a tendency for the fat to rise and the sugar to fall, so that you seldom find in sampling ice cream that it is as rich at the sides and bottom of the can as it is at the center and top.

In the sale at retail if the ice cream is permitted to get soft, as often it is, the same action again takes place when it is rehardened.

The variation so caused commonly is equal to 6 points of fat in different parts of a ten gallon can of ice cream,

that is, the upper part of a can may show 16 per cent. and the lower only 10 per cent.

For data as to experiments see paper Dr. W. A. Wyman of Kentucky, read at the Ninth Annual Convention of National Association of Ice Cream Manufacturers, entitled, "Impossibility of Accurate Tests of Butter Fat in Ice Cream," and Vermont Experiment Station Bulletin No. 155, entitled, "Principles and Practice of Ice Cream Making," by Prof. R. M. Washburn.

Extracts from these papers are found on pages 60 and 61 of the Reports of Hearings on Ice Cream before Dr. C. A. Alsberg, filed herewith.

In view of the above it is submitted that such laboratory standards are impractical as applied to ice cream and subject manufacturers to arrest and prosecution for violations due not to their own fault, but to conditions over which they have no control.

As to any and all of the above matters, we state that we will be pleased to submit oral or written proof.

Respectfully submitted,

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